



Counter

1x Counter 24 V, 500 kHz, 32 Bit

- 32-bit counter
- Up to 500 KHz (4-fold evaluation)
- Accommodates 24 V incremental encoders and proximity sensors
- Filters: 10 kHz | 50 kHz | 100 kHz | 500 kHz
- All inputs can be inverted
- Limits for counter and measured readings
- Hysteresis for input
- Pulse duration for output
- Refresh rate / averaging time for measuring mode
- 8 bytes of input data (count and status)
- 8 bytes of output data (preset count and commands)

Counters are used to detect pulses that are faster than a controller's cycles, i.e., signals that the controller will be unable to detect properly and that therefore need to be pre-processed.

The counter module detects the edges of 24 V signals as pulses. The impulses can be counted or converted into a frequency, rotational speed, or period. The counter module features an additional 24 V input and a 24 V output for a direct response to start pulses and to quick system state changes.

Capturing modes

Pulse & direction

Rotary encoder with single evaluation

Rotary encoder with double evaluation

Rotary encoder with quadruple evaluation

Counting methods

Continuous counting

Once-only counting

Periodic counting

Measuring mode

Frequency measurement

Rotational speed measurement

Period measurement

Programmable input

PLC input

Approval (HW gate)

Synchronization

Periodic synchronization

Latch

Latch & retrigger

Can be inverted

Programmable output
 PLC output
 Count >= Reference value
 Count <= Reference value
 Count = Reference value
 Can apply a substitute value at STOP

Technical specifications

General information	
Order number	600-300-7AA01
Article name	1x Counter 24 V, 500 KHz, 32 bit
Scope of delivery	1x Counter 24 V, 500 KHz, 32 bit
Dimensions (DxWxH)	110 x 14 x 73 mm
Weight	Approx. 70 g
Input voltage	24 V DC
Electrical isolation	
from the backplane bus	Yes
Between the channels	No
Current draw	
External	Max. 10 mA + load
Internal	Max. 86 mA
Power dissipation	0.8 W
Input characteristic curve	Type 2, EN 61131-2
Output current	
Rated value	500 mA
Leakage current	Max. 0.5 A
Short-circuit protection	Electronic
Parameter configuration length	16 bytes
Number of counters	1
Counter bit depth	32 bits

Counting frequency per channel	Max. 500 kHz (for 4x evaluation)
Hot-swap capable	Yes
Ambient conditions	
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-20 °C ... +80 °C
Relative air humidity	95 % r H without condensation
Protection rating	IP 20
Certifications	CE, UL
UL	
Surrounding Air Temperature	0 °C ... +60 °C
Pollution degree	2
CE	
Noise immunity	DIN EN 61000-6-2 "EMC Immunity"
Interference emission	DIN EN 61000-6-4 "EMC Emission"
Vibration and shock resistance	DIN EN 60068-2-6:2008 „Vibration“, DIN EN 60068-2-27:2010 „Shock“
RoHS	Yes
REACH	Yes